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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/216,519	12/18/1998	DARREN KERR	112025-0112	9572

7590 07/22/2002

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BOSTON, MA 02210

EXAMINER

MEISLAHN, DOUGLAS J

13

ART UNIT PAPER NUMBER

2132

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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04/10/2002

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BOSTON, MA 02110

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**Office Action Summary**

Application No.

09/216,519

Applicant(s)

KERR ET AL.

Examiner

Douglas J. Meislahn

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2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is in response to the amendment filed 18 January 2002 that added claims 21-34.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 32 is objected to because of the following informalities: it does not end with a period. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 34 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures must be embodied on a computer-readable medium to be statutory.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 10-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hawe et al. (5070528). See the paragraph spanning columns 8 and 9.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawe et al. in view of Narad et al.

Hawe et al. teaches a pipelined cryptographic processor. They do not mention that the encryptor is TCSM. With respect to this limitation, see figures 1-3 and 14 and columns 6-9, 14, 16, 30, 37, and 40 of Narad et al. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for Hawe et al.'s encryptor to be an encryption tightly coupled state machine to accelerate processing.

9. Claims 21-23, 27-29, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawe et al. in view of Johns-Vano et al. (6026490) and Farrell et al. (5182800).

Hawe et al. show a pipelined cryptographic processor. They do not mention ALUs. Lines 36-38 of column 3 in Johns-Vano et al. show an execution unit that has an

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ALU and a cryptographic processor. In lines 46-49, Johns-Vano et al. explain that the cryptographic processor performs cryptographic operations. They do not mandate that the encryptor is a tightly coupled state machine. Farrell et al. teach the use of tightly coupled state machines in the pipelined systems in the abstract, figure 10, lines 60-63 of column 16, and lines 24-39 of column 30. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a tightly coupled state machine as the encryptor in Johns-Vano et al. in pipelining as taught by Farrell et al and to discriminate between the encryptor and the ALUs in Hawe et al. as taught by Johns-Vano et al. See also column 7 of Johns-Vano et al.

10. Claims 7-9, 13-14, 16-19, 25-27, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawe et al., Narad et al., Johns-Vano et al., and Farrell et al. as applied to claims 5, 12, 15, 21, and 28 above.

Narad et al. present a cryptographic processor in a pipeline environment. Johns-Vano et al. and Farrell et al. present a circuit that has ALUs and a tightly coupled state machine encryptor. Neither says that the encryptor performs DES related operations. Official notice is taken that DES is old and well-known. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform DES related operations with the encryptor in Narad et al. or Johns-Vano et al. because DES is a standard.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawe et al. in view of Key et al.

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Hawe et al. show a tightly coupled crypto processor. They do not show an array. Figure 3 of Key et al. shows an array. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow pipeline connectivity.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

  
DJM

April 8, 2002

Douglas J. Meislahn  
Examiner  
Art Unit 2132



GILBERTO BARRON  
SUPERVISORY PATENT EXAMINER  
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